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Second Day

Senator Symington. We will call the meeting to order this morning.

Mr. Director, we welcome you again, and we will continue on the premise that you are all under oath and your testimony, therefore, will be sworn testimony.

Is there anybody here that you plan to have testify who was not here the last time?

25X1A9a Mr. Dulles. There are three persons here, Mr. Chairman, who were not here the last time, whose names have just been given to the secretary here: [REDACTED] of our Office of National Estimates; Dr. Scoville, who is head of our Office of Scientific Intelligence; and Colonel William O. Farrior, who is here with General Watson.

As any of them might be called on, I think they might all be sworn in.

Senator Symington. Raise your right hand.

Do you solemnly swear that the testimony you are about to give before this subcommittee of the Committee on Armed Services of the Senate of the United States will be the truth, the whole truth, and nothing but the truth, so help you God?

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[REDACTED] I do.

Dr. Scoville. I do.

Colonel Farrior. I do.

Senator Symington. General, it is a pleasure to see you again.

For the sake of the record, would you identify anybody that you would like, for the record, these people who are here?

Mr. Hamilton. Mr. Chairman, if I may just make a preliminary comment. Mr. Dulles and General Watson, and many of these gentlemen who are working with him, were good enough to devote several hours yesterday to working with me on this matter, and I have no doubt that they devoted several more hours, in addition, to preparation.

I would like to express my appreciation for their cooperation.

Mr. Dulles. Thank you very much.

Senator Symington. I am sure the committee joins with counsel in expressing appreciation of your cooperation in this matter.

Mr. Counsel, will you continue?

TESTIMONY OF ALLEN WELSH DULLES,
DIRECTOR OF CENTRAL INTELLIGENCE

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BRIGADIER GENERAL HAROLD E. WATSON;
[REDACTED]
OFFICE OF NATIONAL ESTIMATES, CIA;
AND DR. HERBERT SCOVILLE, JR.,
OFFICE OF SCIENTIFIC INTELLIGENCE, CIA

(RESUMED)

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Mr. Hamilton. Mr. Dulles, you completed last time a prepared statement, as I recall it. Do you have anything this morning that you would care to add before we turn to questioning?

Mr. Dulles. Mr. Hamilton, in the course of the testimony of last Wednesday, various committee members raised certain questions which at that time were not fully answered.

I have attempted here, working with my associates and General Watson, to prepare answers to those questions.

Also, in reviewing the record, there seemed to be, here and there, points that we could make a little more precise or where we got into what I might call the numbers racket. In estimating numbers of planes, there can be great confusion as between total production, inventory, and planes in operational units, and I will ask General Watson to clarify that point with a slide which he had prepared, which I think will help to make the record clear, and we will be glad to put that slide into the record.

Mr. Hamilton. Yes. General Watson, if I may, before you begin telling us about the slide, would you mind stating for the record your present position?

- 71 -

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General Watson. Yes.

Mr. Hamilton. And your previous positions in the Air Force insofar as they may relate to your present position and your present intelligence responsibility. I believe we don't have that in the record.

General Watson. Yes, sir.

I am presently Commanding General of the Air Technical Intelligence Center, Wright-Patterson Air Force Base, Ohio.

Mr. Hamilton. What, in general, are the functions of that center, General?

General Watson. The Air Technical Intelligence Center is responsible to the Director of Intelligence, United States Air Force, for that portion of his mission as concerns air technical intelligence on foreign nations, developed for the purpose of preventing technological scientific surprise.

Mr. Hamilton. How long have you been in that capacity?

General Watson. This is my second tour there. My present tour started a year ago last October.

Mr. Hamilton. October of 1954?

- 72 -

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General Watson. 1954, yes, sir.

Mr. Hamilton. And before that, your previous tour?

General Watson. Before that, I was Assistant Chief of Staff, Intelligence, for Admiral Fechteler, in what is called CinCSouth, in Naples.

Mr. Hamilton. During what period of time were you there?

General Watson. I was there for one year, sir.

Mr. Hamilton. 1953 to 1954?

General Watson. From September of 1953 to September of 1954.

Mr. Hamilton. And prior to that?

General Watson. Prior to that, I was Assistant Chief of Staff, Intelligence, for General Norstad in the central region of SHAPE.

Mr. Hamilton. During what period of time?

General Watson. That was for a two-year period.

During this period --

Mr. Hamilton. 1952 to 1954?

General Watson. 1954.

During this period, I was also designated Special Project Officer on two air war gaming studies that were assigned to General Norstad to accomplish for General Ridgway, Commanding General of SHAPE at that time.

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Mr. Hamilton. And before 1952?

General Watson. Before that, I spent two years as Commander of the Air Technical Intelligence Center at Wright-Patterson Air Force Base.

Mr. Hamilton. That was from 1950 to 1952?

General Watson. That would be from -- I am not sure of these dates.

Mr. Hamilton. During the whole of this period that you have talked about, have you in general seen our own intelligence with respect to Russian capabilities with regard to airpower?

General Watson. Yes, sir.

Mr. Hamilton. And before you started your previous tour of duty with the Air Technical Command --

General Watson. Well, prior to my first assignment as Commanding Officer, Air Technical Intelligence Center, I spent two years in the Directorate of Intelligence, United States Air Force, as head of the Strategic Vulnerability organization, which is now the Air Targets Division of the Directorate of Intelligence.

Mr. Hamilton. Would that be studying targets of potential enemies?

General Watson. OFF THE RECORD

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Mr. Hamilton. Do the records and other types of information that you now have available to you at Wright Field show our present view of the general development of the various elements of Soviet airpower capabilities during the pe riod since the war?

General Watson. A combination of the information that we have at the Air Technical Intelligence Center, and the holdings of the Directorate of Intelligence. The other directorates of the Directorate of Intelligence would contain this type of information.

Mr. Hamilton. Do you have access to that other information, in addition to that w hich is directly under your control?

General Watson. As in the accomplishment of my mission?

Mr. Hamilton. I don't mean from the standpoint of producing it here; I mean from the standpoint that you do from day to day.

General Watson. Yes, sir, I have access to it as my mission at Wright Field requires, or for support of other things I may be called upon to do.

Mr. Hamilton. Thank you.

In connection with your studies of the various elements of Soviet airpower, do you have occasion from time to time to compare their position with ours with respect to these various elements?

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General Watson. Our prime mission, of course, is to develop and produce intelligence on foreign nations.

Mr. Hamilton. So I understand.

General Watson. Including the Soviet Union.

In accomplishing this mission, from time to time it is necessary to examine [] elements of Western nations' technology and scientific advances. []

Mr. Hamilton. Including, by the phrase "Western nations," the United States?

General Watson. Yes, sir.

Mr. Hamilton. Thank you very much, General.

Now I wonder if you would be so kind as to explain the chart to the committee.

Mr. Dulles. I wonder, Mr. Hamilton, if I could introduce one or two matters first, which do not relate directly to aircraft, but to guided missiles, and then we will take up the aircraft situation, if that is agreeable to the chairman.

Mr. Hamilton. Certainly.

Mr. Dulles. In the course of the hearing on last Wednesday, the request was made that we put into the record what we knew of the German

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V-2 experience, the point, I believe, being that it was from this base that the Soviet started their own work on the guided missile program since they took over the testing field at Peenemunde; and, being in their zone, they also took over a considerable number of German technicians.

If it is agreeable to you, I will briefly give that history; it is quite short.

Senator Symington. Fine, Mr. Director. Please do.

Mr. Dulles. In 1929, the decision was made in Germany that investigation should be conducted to ascertain the value of rocket propulsion to military art. It was quite early, you know, in 1929.

In 1932, German military activities started experimental work on rockets.

In 1936, design work was initiated on the V-2, sometimes known as the A-4, and the A-3.

In 1936-37, the Peenemunde test facility was constructed. That was, as you know, on that spit of land that is in the east there, off the German coast.

In 1942, the first 25-ton thrust motor was built. That is the early history.

- 77 -

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Now we turn to the test and operational firings.

On 3 October 1942, the first successful V-2 test firing took place at Peenemunde; that, as you know, was well into the war, and almost a year after we entered the war.

On 8 September 1944, the first operational firing of a V-2 against London -- I remember that quite well. It just happened I was there on that day and having lunch with Bill Donovan at Claridge's Hotel, and that V-2 hit London. It was the first one that came down.

A total of 1800 V-2 missiles had been produced by the time of the first operational firing.

Mr. Hamilton. How many, sir?

Mr. Dulles. Eighteen hundred.

Now, as to production: Production of the V-2 began in January, 1944, that is, other than test. This is mass production. During the calendar year 1944, a total of 7,500 V-2s were produced.

In October, 1944, one plant produced 620 missiles.

The period January to March, 1945 -- it was during the latter days of the war and before the total collapse -- a total of 2,500 V-2s were produced.

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Range: The maximum range of the V-2 was about 190 nautical miles. The maximum ranges utilized by the Germans in operational missions were approximately 150 to 165 nautical miles.

This information being of a historical character, and since we have access to many of the German technicians who worked on this program, we believe that this historical information is pretty sound as to progress and numbers.

Senator Symington. May I interject there for just a minute.

Those figures and those facts, to the best of my knowledge, are the ones that we have had before in various reports. There was a report, which always interested me, that I got in the Air Force, stating that whereas the Germans, I think you said, which I did not know, started around 1929, the Russians started a rocket school in 1920. I always thought that was rather interesting.

Mr. Dulles. Yes.

Senator Symington. This committee is very anxious to get the facts, and in reading over the weekend some of the testimony of Secretary Quarles in reply to a question about the efficacy of the V-2 which was asked him, I believe, by the chairman of the full

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committee, Mr. Cannon, you could not quite tell what it was that Mr. Quarles was replying to, but General, the impression was that the V-2, because it did not have an atomic or hydrogen warhead -- this is around page -- I had better not take a chance -- 880 or 700 to 800 or 889 -- that it did not have an atomic warhead, that it would not be, could not be, too effective. That was the implication you might get.

That is in direct opposition to the statement made by General Eisenhower in his book "Crusade in Europe." And for the record, I wish that somebody in the Air Force would compare those two and submit it for the record, and give us just what was the implication of the V-2.

General Watson. I will see that it is done, Mr. Chairman.

Senator Symington. Thank you.

(The information referred to is as follows:)

COMMITTEE INSERT

Mr. Dulles. Mr. Chairman, the next point is to clear up certain possible confusion in the testimony of last Wednesday, and also, the point you raised with regard to the possible conflict of testimony between what Secretary Quarles stated and what I had stated.

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I have here a statement that has been looked over this morning before we came, by Secretary Quarles, and he indicated agreement with it.

Senator Saltonstall. This is his statement, or yours?

Mr. Dulles. No, this is my statement, but it is a statement that General Watson and our experts went over, and was prepared yesterday after reviewing the testimony; and, as I said, was submitted to Secretary Quarles this morning.

He made a few suggested changes, all of which seemed satisfactory to our experts.

Regarding the committee's questions on the Soviet surface-to-surface missile program, I wish to add the following information to my previous testimony:

OFF THE RECORD

Mr. Dulles discussed Soviet programs to develop guided missiles, pointing out that the USSR acquired German V-1 and V-2 missiles at the end of World War II, together with German specialists. The Soviets began testing and developing these missiles shortly thereafter, and have since engaged in an intensive missile program.

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Senator Symington. The page is 791.

General Watson. 791 of the appropriation hearings.

Mr. Dulles. Before General Watson goes into this numbers problem, I wanted just to put in a brief --

Senator Symington. Mr. Director, will you excuse me there. Inasmuch as there is a great deal of interest in the missile picture, and inasmuch as you are going back over the testimony, although our plan is to have the counsel handle the hearing, to start questioning, I would appreciate it if at this point, if there are any questions that Senator Saltonstall, Senator Jackson, or Senator Duff have, they be asked, on the missile picture, and consider that testimony complete.

Would that meet with your desire?

Mr. Dulles. Yes.

Senator Symington. Mr. Counsel?

Mr. Hamilton. Just one question, Mr. Dulles.

OFF THE RECORD

Mr. Hamilton. That is all.

Senator Symington. Senator Saltonstall?

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Senator Saltonstall. I think, Mr. Chairman, the only question I have is this:

During the war, Mr. Dulles, when they produced these several thousand V-2 bombs, rockets, they were being -- have you any idea how many men were employed on those projects?

Mr. Dulles. It was one of their major projects.

Have you got the figures? I think we could get that, because the German scientists --

Senator Saltonstall. I want to say, I was in one of those chalk pits, I was in the V-2 underground pits, and I saw the number of people that had been killed in making those things, and so on, and it ran up into the thousands of people, mostly prisoners of war and forced labor; am I not correct on that?

Mr. Dulles. I do not know about the forced labor.

General Watson. There was forced labor.

Mr. Dulles. There was forced labor. I think we can get you pretty full statistics of how many they had on Peenemunde.

You will recall that during the war we obtained intelligence with regard to the location of Peenemunde, and there was a devastating

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raid carried on by the British which pretty well knocked it out for a time. That was in late '33.

Senator Jackson. '43.

Mr. Dulles. I mean late '43.

General Watson. Late '43 and early '44.

Mr. Dulles. I was one of the first that got the Peenemunde site.

You never can tell --

Senator Symington. I hear many things, Mr. Director, about the intelligence you should be proud of.

Mr. Dulles. It is better not to boast.

Senator Symington. I am thinking of Italy, and other things.

Senator Saltonstall. All I wanted to bring out was, there were many thousands of men employed on that, and it was being done as a war effort, with forced labor.

General Watson. Forced draft.

Senator Saltonstall. Forced draft labor.

Thank you, Mr. Chairman.

Mr. Dulles. Certainly at one time, the Germans put major emphasis on this program. This was to be Hitler's secret weapon.

Senator Saltonstall. This was a tunnel five or six miles in depth, and people living there day in and day out.

- 84 -

~~TOP SECRET~~

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Mr. Dulles. Yes.

Senator Symington. Senator Jackson?

Senator Jackson. Mr. Dulles, do you have any estimates as to the number of ballistic missiles the Soviets might have? I am referring, by "ballistic missiles," to all range categories, ready for operational use at this time.

OFF THE RECORD

Discussion of Soviet ballistic missiles.

Senator Jackson. You have very little information on whether their V-2 of 190 nautical mile range, I think it was initially, you do not have any evidence, then, I take it, as to the accuracy at the present time of that old German V-2 missile?

Mr. Dulles. Well, we have a good deal of information as to the accuracy of the German missile, and we would assume they had improved that accuracy.

Would you want to add to that, General?

General Watson. I believe that statement is essentially correct, sir.

Senator Jackson. What I am trying to get at, you know what we have on the Redstone. We have, whatever it is, [] miles or thereabouts, nautical miles.

Is it not reasonable to assume that, knowing all the activity,

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which apparently was greater than ours, in connection with the testing of the old German V-2, that they certainly must have some of these available for operational purposes with reasonably accurate CEP? Is that --

Mr. Dulles. Which are you talking about now, the short-range missile?

Senator Jackson. Yes, I am talking about the [] missile; the beefed-up, improved V-2, which is nothing more than we have in the so-called Redstone.

Mr. Dulles. I think it would be only safe to assume they had that.

OFF THE RECORD

Further discussion of Soviet ballistic missiles.

Senator Jackson. General, let me ask you a broad question.

General Watson. Yes, sir.

Senator Jackson. Would you say, knowing what we have done in our missile field, would you say the Soviets have done less or more work in the ballistic missile field than we have?

Mr. Dulles. May I say, Mr. Chairman, as far as I am concerned, I keep out of comparisons. It is up to the Department of Defense to draw comparisons.

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Senator Symington. Let me add to that, Mr. Director, if that is your position, I am sure my distinguished colleague, practically my favorite colleague, would not object to my saying if the General does not wish to answer the question to the committee based on the work he is doing, it is entirely satisfactory to us.

I am sure Senator Jackson would agree to that. But if somebody would agree to answer it --

Mr. Hamilton. But the General does have a view on it.

Senator Jackson. I mean if you know; if you do not, I can see Mr. Dulles' problem.

I would think, however, whether the decision you do or do not is one for Defense, that in order to properly get the Soviet capability in this field we obviously have to know what we are doing, you would have to come up with some answers --

General Watson. To accomplish our mission, we certainly have kept track of what was done with the V-2 missile in this country. []

It now appears from the evidence we have that the Soviets and ourselves both started work on ballistic missiles, the V-2, at about the same time; and it is my impression that the activity on the V-2 missile

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by those responsible within the U. S. Government was quite intensive and feverish. This is my impression, because I visited the White Sands test grounds on occasion, and the activity seemed to be at a very high pitch.

The evidence indicates rather this same level of activity was taking place in the Soviet Union.

[] They are very much interested, apparently, in developing, producing, and otherwise having ready for operational units at the earliest possible date, ballistic missiles.

I believe that would be as far as I could go on that statement.

Senator Jackson. We will ask the Defense Department. They have the information from you folks --

Mr. Dulles. Oh, yes.

Senator Jackson. (Continuing) -- as to what the Soviets have done.

General Watson. Yes, sir.

Senator Jackson. And they certainly have the information available on what we have done, and it is for them --

Mr. Hamilton. May I just clear up a small point for the record:

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When you said "V-2", were you talking only about the 200-mile missile? []

General Watson. [] The V-2 has a range between 190 and 200.

Mr. Hamilton. That is what I was thinking about.

General Watson. I was not talking about --

Mr. Hamilton. So the comments you made are addressed only to relative activity on the V-2 in that sense?

General Watson. Yes, sir.

Mr. Hamilton. As I recall it, you did not say anything one way or the other about the [] missile.

General Watson. No, sir.

Mr. Hamilton. Is there any word that you use, like "BEAR" or "BADGER" which describes this [] missile of theirs?

General Watson. I think the language should confine it to ranges.

Mr. Hamilton. Between what ranges would you select, General, for the [] missile?

General Watson. OFF THE RECORD

Discussion of missile ranges, categories and production.

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Senator Jackson. And in order to put a missile in production, obviously you must have flight-tested it.

Mr. Dulles. Yes. That is correct.

Senator Symington. Is that all, Senator Jackson?

Senator Jackson. That is all.

Senator Duff. I would just like to interject one thing Senator Symington. You have the floor, Senator.

Senator Jackson. I am sorry, Senator Duff. I did not mean to interrupt.

Senator Duff. That is possible, without being verified; is that correct?

Mr. Dulles. OFF THE RECORD

Senator Duff. That clarifies it for me.

Senator Symington. Is that all, Senator Duff?

Senator Duff. Yes, sir.

Senator Symington. Mr. Director, I am a little mixed up here, myself, and I would just like for the sake of the record to ask a few short questions, and you can answer them just as shortly as you care to.

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First, as I understand it, the V-2 missile was flown originally, fired originally, in 1942, and was in fairly heavy production in 1944 in Nazi Germany ; is that correct?

Mr. Dulles. 3 October 1942, the first successful V-2 test-firing at Peenemunde.

We have information that a total of 1800 V-2 missiles had been produced by the time of the first operational firing.

The first operational firing, however, was not this test-firing, but the first operational test-firing was the firing of 8 September 1944, the missile which hit London.

Senator Symington. Then let me repeat my question: The first test-firing was in 1942, and the missile was being made in fairly substantial production in 1944; is that correct?

Mr. Dulles. That is correct.

Senator Symington. My next question is: As I understand it, the Soviets were firing the V-2 missile in 1947.

Mr. Dulles. Yes. (OFF THE RECORD.)

Senator Symington. In other words, test-fired in 1942 by the Nazis; production in 1944, and firings of the same missile by the Soviet Communists in 1947, or a comparable missile.

Mr. Dulles. That is correct.

Senator Symington. (OFF THE RECORD)

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To the best of your knowledge, General, is that correct, in the way of a ballistic missile?

Mr. Dulles. Now you are getting out of my field, of course.

Senator Symington. I am just trying to get this clarified in my own mind. I do not want to get this mixed up.

General Watson. I think I have that information, Mr. Symington.

Senator Symington. Well, the Army testified that the range of the missile they fired was , presumably nautical miles; and it has been testified that no other ballistic missile has been fired except the Redstone. Is that correct? It would answer itself, if it is correct.

General Watson. Well, sir, we have fired the Corporal.

Senator Jackson. There never has been a firing that far. It is something we can get later.

Senator Symington. Well, let me proceed here.

(OFF THE RECORD)

Mr. Dulles. (OFF THE RECORD)

Senator Symington. I would like to have somebody tell me what is the farthest west of a place from which the Russians could launch a ballistic missile today, land which they themselves control. It would be in west Germany at some point. Where would that point be, roughly?

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Mr. Dulles. I am not sure I get the question.

Senator Symington. How far, how close, for example, are they at any point to, we will say, ~~Bordeaux~~ or London?

Mr. Dulles. That would be roughly on the Elbe, or somewhere in that direction.

General Watson. East Germany and satellites.

Senator Symington. Well, they go into west Germany, do they not? They go well beyond Berlin.

Mr. Dulles. They go up to the Elbe River, somewhere along that.

Senator Symington. In order not to delay the hearing, could we find out how far west they come where they could establish launching sites, and then how much of Europe -- which I would presume would be all of Europe -- they could cover from those launching sites, ☐ assuming hypothetically that they had available missiles with ranges of 500, 1,000, and 1,500 miles?

Do you see what I am trying to get at?

Mr. Dulles. Yes. They could cover a very substantial part of Europe.

Senator Symington. I would think they could reach into ~~Spain~~. I do not know how far they would reach into it. Certainly they

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could reach it, if they were on the Elbe. ~~[Northern Spain]~~ is not a thousand miles away from the Elbe, is it?

Mr. Dulles. Well, ~~[Madrid]~~ might be, certainly, the beginning of it. That is a question of mathematics.

Senator Symington. Let's get the record clear what the arc of penetration would be. []

Mr. Dulles. There could be prepared a map showing 500, 1,000, 1500.

[]

Senator Symington. Now, Mr. Director, one further question:

There has been a gentleman who tried to see us, who talked to some of my staff for many months, and finally, at the suggestion of one of my colleagues on the other side of the aisle, I did talk with him; and he said with great positiveness to me that he had returned from England, and that the British told him that on the Murmansk range the Russians had been discovered test-firing a missile of 3500 miles.

Is there any evidence of that which you have heard of?

Mr. Dulles. Never heard of it.

Senator Symington. I just wanted to find out.

Mr. Dulles. Never heard of it.

- 94 -

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Dr. Scoville. I said I never heard of it.

Senator Symington. Thank you, Mr. Director.

Unless there are some further questions on missiles, we will not proceed to the next point that you have.

Mr. Dulles. I might just add one point on missiles.

The problem the Soviets are facing is to determine, among the range of very high priorities, where they wish to put the emphasis. They may have capabilities in certain fields.

[]

Senator Jackson. Do you have any evidence, Mr. Dulles, on their priorities on missiles as opposed to other delivery systems?

Mr. Dulles. That is a very difficult question.

Senator Jackson. Of course, everything is a priority over there.

Mr. Dulles. We put in the topmost range of priority, we would put the -- don't hold me to this order, but this is in the top category -- we would put guided missiles, long-range aircraft, and nuclear power.

[]

Senator Jackson. Would you subscribe to the view, do you subscribe to the view that it is to the Soviet interest to get a

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1500-mile ballistic missile more than it is to our interest to get such a missile, our interest being the 5500-mile ballistic missile?

Mr. Dulles. Well, I think maybe you have put words into my mouth in a field that I am not competent to deal with.

Senator Jackson. Put it this way: In interpreting your intelligence and trying to find out where the emphasis is going to be, is it not reasonable to assume that from the standpoint of foreign policy, a 1500-mile missile, if it can be achieved before a 5500-mile missile, and in quantity, would be of great interest to the Soviets?

Mr. Dulles. I think it would be of great interest to all of us, as a matter of fact.

Senator Symington. I think Senator Jackson's question is very pertinent, because it has just been coming over the wire, and was handed to me, that Khrushchev announced in Birmingham, England, boasted, that the Soviet Union is now building a guided missile with a nuclear warhead.

Mr. Hamilton. Mr. Dulles, Senator Jackson made a point which should be clarified for the record.

When you used the word "guided," did you mean ballistic missile?

- 96 -

~~TOP SECRET~~

~~TOP SECRET~~

Mr. Dulles. Ballistic.

Mr. Hamilton. Or a missile of some other type of guidance?

Mr. Dulles. No. When we use ^{"guided"}~~"guided"~~ missile, we mean ballistic missile. (OFF THE RECORD)

Mr. Dulles. As far as known.

Senator Jackson. Out-of-the-atmosphere delivery system?

Mr. Dulles. Well, the shorter range ones might not go out of the atmosphere; the longer range ones probably would,

Senator Jackson. They go up and down. What height?

Mr. Dulles. It is a question of where the atmosphere ends.

Senator Jackson. It is merely a matter of distance; as you project out, the higher it has to go.

Mr. Dulles. That is correct.

Senator Jackson. Not necessarily. It is the amount of thrust that you put behind it which determines the range.

General Watson. Yes. There are several ways of projecting a missile.

Senator Jackson. Well, that is a matter, I suppose, for the Defense Department. It just occurred to me in evaluating intelligence information from the Soviet Union, to find out where they are placing the emphasis, one would want to know where their national interest lie in this field. And I just wondered -- I say, in interpreting --

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Mr. Dulles. Yes, sir.

Senator Jackson. (Continuing) -- in interpreting the intelligence information in the missile field, one would want to know where the national interests of the Soviet Union would lie in this area. That is why I asked the question.

Mr. Dulles. The General has one little item which bears on that which he would like to add.

General Watson. With regard to your question, sir, on the requirements of the Soviet versus requirements of the Western world --

Off the Record

[~~Senator Symington. I am sorry. I was talking.~~

~~General Watson. With regard to the requirements of a 1500 nautical mile missile, requirements of the Soviets versus the requirements of the Western world, I think it should be pointed out that a 1500 nautical mile missile launched from bases in Europe could create some degree of neutralization of the Soviet SAC, to strike their bases from Western Europe, you see. That is a possibility.~~

~~Senator Jackson. How is that again?~~

~~Mr. Hamilton. I am a little puzzled, when you say a 1500-mile weapon --~~

~~- 98 -~~

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Section deleted, to be replaced with:

*Approved For Release 2001/08/25 : CIA-RDP80M01389R000400110010-2
of ballistic missiles.*

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General Watson. Launched from bases --

Mr. Hamilton. (Continuing) -- if we had it.

General Watson. The Western world, if they had a 1500-mile, nautical mile, missile and launched from bases in Europe against Soviet objectives, this sounds to me as though it would be a reasonable requirement to have this in our inventory.

Mr. Hamilton. In our inventory?

General Watson. Yes.

Mr. Hamilton. As against the Soviet strategic air force bases?

General Watson. As against the Soviet strength to make war.

Mr. Dulles. Our bases are further forward than their bases, and while if they had --

Mr. Hamilton. That is a very interesting point.

Mr. Dulles. (Continuing) -- and while if they had a 1500-mile ballistic missile, they might be very troublesome for certain of our overseas bases, our overseas bases with the same weapon would be even more troublesome to their heartland, or very important parts of it.

Senator Jackson. I agree on that. But my point was, General, whether if you had a choice of the two, would it not be more to

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our national interest to push the ICBM -- I mean, more to their national interests to push the 1500-mile missile, in trying to evaluate their activity in these different fields?

General Watson. I see your question, sir, quite clearly, I believe.

I cannot judge whether the requirement would be of a higher priority for the Western world to have, the U. S. to have, the ICBM over the intermediate-range or the 1500.

It occurs to me that a 1500-nautical mile missile, as I previously stated, could be used to a very useful degree against Soviet strength to wage war.

Senator Jackson. The reason I asked the question, the last time the Defense Department testified on official Defense Department policy was that it was to the national interest of the Soviets to get the 1500-mile missile, and ours to get the ICBM, so I asked it.

Senator Symington. It seems to me that your point is based on the premise that our bases would hold up in Western Europe, that we could hit Moscow, for example, or some comparable target, from where we are now; right?

General Watson. In Western Europe, yes, sir. *End off the Record*

Mr. Hamilton. Senator Saltonstall, or Senator Duff, do you have any other questions before I ask Mr. Dulles --

- 100 -

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Senator Duff. No, I have no further questions.

Senator Symington. Gentlemen, I think we have now covered the missile picture, at least got considerable clarification on it.

Mr. Director, we would be glad for you to go ahead, sir, if you will.

Mr. Dulles. We can put in charts [on the ranges], and we will do so, in agreement with counsel.

Senator Symington. I think it would be better, rather than taking 10 or 15 minutes to analyze that, if we did it that way, and in that way saved your time.

Mr. Dulles. Before General Watson presents the graphs on figures of aircraft production, I would like to make a general statement covering my testimony today and of Wednesday.

(OFF THE RECORD)

Mr. Dulles. The TU-104. That is this transport plane. This was a show craft. []

They have always subordinated civil aircraft to military aircraft. They may feel, for prestige reasons, they may wish to develop civil aircraft for the next few years a little faster.

[]

Senator Symington. Is it not true the civilian aircraft in effect is a modification of their medium bomber, the BADGER, with

- 101 -

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plexiglass canopy; is that not correct?

General Watson. That is essentially correct.

Senator Symington. []

[]

Mr. Dulles. []

General, would you give the slide and figures?

Senator Symington. General, since the subject has been brought up, is it not true, as was portrayed in prominent things like Life Magazine, that the thrust in the engine on the transport that landed in London with General Serov was more than the thrust on any engine that we have in production in this country?

General Watson. It is more than any engine that we have in operational units, and in production, yes, sir.

Senator Symington. Thank you.

Mr. Dulles. I might just add that whether it is wise to put so much thrust in one engine as against separating your thrust into several engines, is apparently a moot point. I am no technician on that subject.

Senator Symington. I would add to that, if I may --

Mr. Dulles. You know more about that than I do.

- 102 -

~~TOP SECRET~~

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Senator Symington. For the first time in all our discussions, I would say that anybody who brought that up, based on my knowledge of airplane history, and I have been in it now for over 15 years, that would be a pretty lame justification.

(NOTE TO THE DIRECTOR: Here follow 10 pages of General Watson's explanation of production, inventory, and operational units curves, keyed to his slide on the hypothetical bomber. These are to be left in the Record with minor deletions for security reasons. In your Master Copy, these are from page 154, line 19, to page 164, next-to-last line.)

- 103 -

~~TOP SECRET~~

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Senator Duff. Mr. Chairman, might I ask the General a question?

Senator Symington. Please do, Senator.

Senator Duff. General, Senator Symington asked you a question relative to the statement in Life about the thrust of that jet engine that the Soviets took down to London.

In this country, do we have any engine in test or prototype equal to that?

General Watson. We have in the U. S., engines approaching that in test.

Senator Duff. When you say "approaching," can you clarify that any further?

General Watson. Yes, sir. Approximately ~~1600~~ pounds thrust.

Senator Symington. You mean thousand.

General Watson. Thousand.

Senator Duff. Approximately what was the amount of that?

General Watson. Approximately ~~19,000~~ pounds thrust in the cabin.

-104-

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Senator Duff. Thank you, sir.

Senator Symington. If I may take a brief minute of the committee's time to present an interesting story, it will only take a minute.

At a dinner at Mr. Lovett's in 1948, the British Ambassador, Lord Inverchapel, emphasized the fact that the British had sold no Nene engines to the Russians; and I had to tell him that was not the information we were getting from the Royal Air Force. He then accepted that.

Then I asked General Vandenberg if he would be sure, the first time he could get a MIG plane, to find out what kind of an engine it was.

And a few weeks after the Korean War started, perhaps a couple of months, he called and said that they had been able to find a MIG close enough, they sent a helicopter in to get the engine out; and what interested me was that the MIG-15 engine was not only the British Nene, but he also told me they had worked out in production certain developments incident to the MEADOW, which was the great problem of heat at that time that our laboratories had not yet worked out in development.

-105-

~~TOP SECRET~~

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That is why the subject has been of special interest to me this morning.

Will you proceed.

Mr. Dulles. Mr. Chairman, the next item is the BISON production. That is the Soviet counterpart of the B-52.

The testimony I gave on the 18th of April with respect to the BISON, the data we have now reviewed, was essentially correct. I have presented the data to the intelligence community. It has been agreed that the numbers are on the right order of magnitude as given in that testimony.

OFF THE RECORD

Senator Symington. I see.

Mr. Dulles. And I will come to the BEAR a little later. As a matter of fact, I can take up the BEAR right here.

OFF THE RECORD

Senator Symington. My final question is: There was a figure given, I believe it was January 1, 1956, where the total production of B-52s was [], and the total production of BISONs was [].

Are those figures, in your opinion, going to be revised as to the production today on the BISONs?

*No change
JS*

-106-

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General Watson. I think the BISON estimate will stand pretty much as was given at that time.

Senator Symington. Thank you, General.

General Watson. I see nothing at the moment which would alter it.

Senator Jackson. Mr. Chairman, in connection with the request on the bombers, I think there is one area which has been left out which has great military significance, and that is the transports. I am referring to the turboprop transport for civilian and military use.

The Soviets, as I understand it, have heretofore never had a four-motor passenger plane, as such, within the Soviet Union, of the conventional type, is that correct, prop-driven?

General Watson. []

It is mostly the twin-engine variety used by the Soviet Union.

Senator Jackson. That is what they have been using in the past?

General Watson. Yes, sir.

Senator Jackson. Would you be able to supply any information as to general transports, turbojet transports; in other words, the

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civilian counterpart of the BEAR, the civilian counterpart of the BADGER, and if there is such, the civilian counterpart of the BISON?

General Watson. [] .7. We have seen jet transport equivalent to the BADGER, which is the CAMEL.

Senator Jackson. That is the one that General Serov arrived in in London. You do not have anything on the turboprop?

General Watson. [] .7

Senator Jackson. There was a story on the radio this morning, or I heard it on the 8:00 o'clock news, Mr. Khrushchev announced that when the British explained their big British turboprop plane, they said they have a bigger one.

Senator Symington. It was not Mr. Khrushchev. It was Mr. Tupolev.

Senator Jackson. I beg your pardon, the airplane designer who was with Mr. Khrushchev.

General Watson. [] .7 It is altogether too early at this moment to make a comment on Mr. Tupolev's statement and claim.

Senator Jackson. How long have we known about the BADGER type transport -- what do you call it -- the CAMEL?

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General Watson. When it was seen in London.

Senator Jackson. I am surprised about that. I do not think you want to say that. I had friends who were in the Soviet Union last year who saw a lot of these things flying around, passenger planes.

General Watson. I understood your question to be --

Senator Jackson. When did we first discover the CAMEL?

General Watson. OFF THE RECORD

Now, we have given the Soviets the capability of -- well, I have additional information that I could use to clear it up.

Now, we have given them a capability to have them by this time period, and we were not particularly surprised when we saw one. [We were very happy, not that they had gotten one, but to have seen it, and displayed in this fashion.] []

Senator Jackson. Do you have any information whether they have CAMELS in quantity?

General Watson. []

Senator Jackson. []

General Watson. []

Mr. Hamilton. Senator Jackson, in that regard, Mr. Dulles and General Watson expressed some views yesterday that might be

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of interest to the committee, as to the motives that the Soviets might have with respect to the development of commercial aircraft which might bear on the hearing here, if you gentlemen would care to mention that.

Mr. Dulles. Would you care to develop that?

Mr. Hamilton. The point was, you said you had given them a capability for the aircraft; and yesterday you spoke to me as to why they might be in that field.

Mr. Dulles. I can add a little on that, on that point.

Mr. Hamilton. As to their lack of interest in commercial aviation.

Mr. Dulles. There was some discussion of this point at the "Summit."

Mr. Hamilton. At Geneva?

Mr. Dulles. No. This was the second conference in Geneva; and that was particularly at the time when we were trying to develop this 17-point program of possible exchanges of information, the freeing ^{up} of information, and so forth and so on, and one of the questions raised there was, how about giving us landing rights so we could land and fly in and you could fly over to us.

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And at that time, they said, "We are not interested, because we haven't any commercial plane that could fly the Atlantic; so why give you landing rights in Moscow when we couldn't use landing rights in New York?"

That was a bantering conversation that took place at Geneva.

Mr. Hamilton. They didn't like the commercial plane, not because they couldn't get it, but because they were not interested.

Mr. Dulles. They could get it. They have undoubtedly the capacity. Because if they could build the BISON, they could build a BISON-type.

Senator Jackson. I assume they give higher priority to the bomber.

Mr. Dulles. That is it. Commercial aircraft didn't have high priority. []

Senator Synington. Of course, you cannot always take them at what they say, as to what they think.

What interested me was that the designer, Mr. Tupolov, who took the B-29 and developed the TU-104 -- is he now traveling with Mr. Khrushchev? In this country we will not have any jet liners for

-111-

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years, built in this country. They showed, according to the broadcast, this 120-seat commercial jet with pride to the Russians, and Mr. Tupolev said, "We have one of 150 seats."

So I assume --

Senator Jackson. Turboprop, I think.

Senator Symington. I do not think he quite said all the way through. But in any case, regardless of which one it was, it shows they have done on what might be termed an intercontinental basis, or approximating what they have already done in the medium field.

It would seem if what he said is true, they are as far ahead of the British as the British are ahead of us in the commercial jet field.

Mr. Dulles. Of course, they are inclined to boast.

Senator Symington. But they have got a pretty good record of turning out behind it.

Mr. Dulles. Shall I continue?

Senator Symington. Yes, sir.

Mr. Dulles. Fresco production. That is known as the MIG-17. There was some question about the figures on this in the testimony

-112-

~~TOP SECRET~~

~~TOP SECRET~~

given by General Twining and the testimony we gave last Wednesday.

The [] figure quoted in General Twining's testimony was a rounded estimate of total production as of 1 January 1956.

Of this number, the Soviets have [] in their inventory, of which [] are in operational units.

The production, of course, is the total aircraft produced as given on that previous chart.

Senator Symington. Mr. Director, what is the total production estimated?

Mr. Dulles. The [] given by General Twining as of 1 January 1956, with [] in their inventory, of which [] are in operational units. That is our best estimate.

Senator Symington. Then the figure of [] given to this committee in another briefing would presumably be the additional production since January 1st, is that correct?

General Watson. Yes.

Mr. Dulles. About [] additional Frescoes in satellite units. That would help to round out that other figure.

Senator Symington. I would just like to ask a question there, for the record. Where have they progressed? Obviously they are

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now, from what you say, putting out MIG-17s in addition to MIG-15s to their satellites. To what satellites have they sent MIG-17s?

Mr. Dulles. OFF THE RECORD

Senator Symington. All right. Thank you.

Mr. Dulles. The BEAGLE production, that is the IL-28.

Our figures of the CIA and the Air Force agree, that the figures General Watson gave on the 18th of April, in our last testimony, of about [] produced by 1 January 1956, is the right order of magnitude.

In my testimony of 18 April, I used figures consistent with our estimate that the bloc would probably have [] jet light bombers in operational bomber units by [].

OFF THE RECORD

I gather that it is probable that they will phase out the IL-28 production, won't they? []

General Watson. Yes.

Senator Symington. Could I ask a question there?

Mr. Dulles. Yes, sir.

Senator Symington. Will that be because of a new light jet bomber, or because they have got the [] missile in production, probably?

-114-

~~TOP SECRET~~

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Mr. Dulles. []

Senator Symington. What would that new shift be?

OFF THE RECORD

Discussion of Soviet jet light bombers. Senator Symington inquired as to the relative advantages of jet light bombers as against missiles.

General Watson. In our opinion, we would feel they would have missions, sir, either tactical or --

Senator Jackson. Support of ground troops; they have always used planes.

General Watson. Or short-range strategic targets, they would like to --

Senator Symington. Jet bombers are very unsatisfactory in supporting ground troops. Continue.

General Watson. In our estimate, we feel that they would have a requirement for a light jet bomber. []

Senator Symington. Based on our experience, do you think they have it now, or you just do not know whether they have one or not?

OFF THE RECORD

-115-

~~TOP SECRET~~

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Senator Symington. Thank you.

One other question: Is the engine that is on the BADGER, which was on this commercial transport, is that a heavier engine than the one on the IL-28?

General Watson. Yes, sir.

Senator Symington. So they might just put heavier engines on the light bomber; is that the category you are getting in?

General Watson. I would suggest that would be one of the improvements they could make on the BEAGLE jet bomber.

Senator Symington. Thank you.

Mr. Dulles. Mr. Chairman, now as to BADGER production in the B-47 type. In my testimony of April 18, I estimated that the USSR has ^{several hundred} BADGERS in operational units at present.

[^]

Mr. Hamilton. What factor would you use, Mr. Dulles, in going from production to operational units?

Mr. Dulles. That depends on the type of aircraft. That is a pretty technical question.

Mr. Hamilton. In this particular case, I was wondering what your estimate would be on production to sustain those operational units.

-116-

~~TOP SECRET~~

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General Watson. Well, in a heavy bomber, you have certain different problems which create a different relationship and ratio between those in operational units and those in inventory which --

Mr. Hamilton. I was talking, really, I meant to address my question, General, to the BADGER.

General Watson. Well --

Mr. Hamilton. Maybe I can get at it this way: Would it be more convenient to get the figures on production?

General Watson. We don't believe it is normal to expect, because of the operational training of operational units, there would be more aircraft held in inventory and training in the BADGER aircraft than as indicated by these figures.

Senator Jackson. What is the total production of this BADGER as of now? I do not think that figure was given.

Mr. Dulles. I don't think we have figures on that, do we?

General Watson. Yes, sir.

Mr. Hamilton. That is really what I was trying to get at by getting the factor and applying it on the operational units.

General Watson. Total production of BADGERS at the present time, 1 April, would be [].

-117-

~~TOP SECRET~~

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Senator Jackson. What do you anticipate? []

OFF THE RECORD

Mr. Dulles. Now, the day fighter and the all-weather fighter production.

In my testimony of 18 April, I estimated that the USSR has at present a total of more than ^{9,000} [] fighters in operational units. This figure included approximately [] FARMERS and [] FLASHLIGHTS, plus FRESCOES, FAGOTS, MIG-15s, and so forth. A FAGOT is the MIG-15.

OFF THE RECORD

Senator Symington. Well, we were talking about the FARMER and the FLASHLIGHT. As I understand it, the FARMER is a supersonic fighter, and the FLASHLIGHT is the all-weather fighter.

General Watson. Yes.

Senator Symington. Roughly, would you say comparable to the 102; is that right?

General Watson. The closest equivalent to the FARMER, sir, would be the F-101.

Senator Symington. The closest equivalent to the FARMER would be the F-101. I stand corrected.

-118-

~~TOP SECRET~~

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How about the FRESCO, what is the closest to that?

General Watson. The closest equivalent to the -- the closest U. S. equivalent to the FRESCO would be the F-100.

Senator Symington. I thought the FRESCO was an all-weather fighter.

General Watson. OFF THE RECORD

Senator Symington. Thank you.

Senator Jackson. What is the MIG-17 comparable to?

General Watson. The MIG-17 is the FRESCO.

Senator Jackson. I have here on this chart --

Mr. Hamilton. You say the FRESCO is the MIG-17?

Senator Symington. I was thinking of the FLASHLIGHT.

[] I am cleared up.

Senator Jackson. It is an improved MIG-15. I beg your pardon.

What is the counterpart of the MIG-15?

General Watson. The FAGOT is a MIG-15, and the closest equivalent to the MIG-15 or the FAGOT is the F-84 or F-86.

Senator Symington. All right, Mr. Director.

Mr. Hamilton. I was going to ask one question.

- 119 -

~~TOP SECRET~~

~~TOP SECRET~~

Do you know whether the Russians have a fighter which is comparable to the F-104?

Mr. Dulles. OFF THE RECORD

Senator Symington. Are you saying that the FARMER, the 60-degree sweep-backed FARMER, is not a supersonic fighter?

General Watson. []

Senator Symington. What is the sweep-back on the 104?

General Watson. I don't know, sir.

Senator Symington. Will you find that out for the record?

General Watson. Yes, sir.

Senator Symington. And include in that the estimated thrust of the 104, I mean the thrust of the 104 and the estimated thrust of the FARMER.

General Watson. Yes, sir.

(The information referred to is as follows:)

COMMITTEE INSERT

Mr. Dulles. Mr. Chairman, that concludes the evidence with regard to the Soviet air force.

I have here a memorandum on Soviet scientific manpower. In view of the time element, possibly I could put this in the

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record, unless you want me to read it to you now. It is five pages long, four and a half pages long. Would you like to hear it, or have it put in the record?

Senator Symington. Well, Mr. Director, it would be up to you. We know you are very busy, and it is never as illuminating -- Mr. Dulles. It is your time now, not mine.

Senator Symington. If you have the time, I would like to hear what you have to say, and I am sure the rest of the committee would, also.

(Note to the Director:

Here follow 7 pages of your presentation on Soviet scientific manpower, and Mr. Hamilton's questions to you about your 20 April speech, left on the Record with minor deletions for security reasons. On your Master Copy, these are from page 189, line 15, to end of page 196.)

Mr. Hamilton. General Watson, if it is agreeable with Mr. Dulles, would you supply the information in response to the question I addressed to him, as to the fields in which you believe they are doing pioneering effort?

-121-

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~~TOP SECRET~~

General Watson. Yes, sir.

Mr. Hamilton. What, if I may say so, General, at the outset, what does one mean by "pioneering effort"? Original creative research?

General Watson. Original creative research.

Mr. Hamilton. Whether or not we are doing anything in the same field, that is irrespective?

General Watson. Yes, irrespective of what Western nations are doing, is what I intended to cover.

Mr. Hamilton and gentlemen, we have made an exhaustive study of the scientific personnel available to the Soviets, their research institutes and facilities. We have examined [] physical science research papers which have been prepared and published by Soviet scientists.

Mr. Hamilton. During what period of time did you do this, General?

Mr. Dulles. Cumulative production.

Mr. Hamilton. That was not in preparation for this hearing, I take it.

General Watson. No, sir. This has been going on for --

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Mr. Hamilton. Years?

General Watson. (Continuing) -- for quite a period of years.

We have also had an opportunity to examine ^{some Soviet} [] airframes, [] engines, and [] various components, which would permit us to make technical evaluations of their manufacturing methods, their metallurgy, and so forth, and general engineering concepts.

We have found ^{several thousand} [] Russian books and articles on metallurgy, [] ^{of} many [^] which were concerned with fundamental research in metallurgy.

Mr. Hamilton. What did they show, if you have a judgment on the question, General, as to the state of the Russian art in that field as compared to our own?

General Watson. Well, I would rather make a comment on their pioneering effort and avoid comparisons, because I have not made such exhaustive, detailed study on comparable U. S. efforts in these areas.

Mr. Hamilton. Thank you.

General Watson. I might make the statement that our research has indicated very definitely that the Soviets apparently have

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concluded that further copying, as they have been doing in the past, of Western nations' products and efforts, is bringing to them diminishing returns.

So they have for a period of over six or seven years been launching into pioneering efforts of their own, and this, then, I believe, will answer your question.

Mr. Hamilton. In other words, they made the determination to strike out on their own to the extent they could, while still relying on such copying as they had six or seven years ago?

General Watson. They copy prodigiously where it suits their purpose to do so.

One subject mentioned previously in the testimony, concerning their propulsion endeavors, they have pioneered on their own in high-thrust turbojet engines, and have tackled many complicated problems involved in developing a design for such turbojet, high-thrust turbojet engines.

They have also --

Senator Jackson. That is one area where pioneering in that field has paid off. We do not have a jet engine of comparable thrust, do we? Have they not developed one of about 30,000 pound thrust?

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Mr. Hamilton. Senator, you mean with or without after burner?

Senator Jackson. I am not sure. My only recollection is --

Mr. Dulles. Dr. Scoville, head of our Office of Scientific Intelligence, has one comment on that.

Dr. Scoville. The question, the problem, is not necessarily the engine with the highest thrust, but it is the highest thrust to weight ratio which pays off, and I believe their thrust --

Senator Jackson. What do they have on that?

Dr. Scoville. The thrust to weight ratio was given a few minutes ago, which is not so outstanding, it is not so amazing.

General Watson. The thrust to weight ratio is a little bit lower than ours, that is correct.

Mr. Hamilton. A little bit lower. I am a layman. Is it good to be lower?

Dr. Scoville. No.

General Watson. No. We emphasize it is more weight per pound of thrust, which means a heavier engine for the power you get in ours.

Mr. Hamilton. I suppose there are some limitations on that. I mean, if you only had one pound per square inch, even

-125-

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though the ratio was wonderful, it wouldn't be of much use.

Senator Symington. It is true they are driving their intercontinental BISON with four engines against eight of ours?

Dr. Seoville. That is right.

Senator Symington. It is also true they are driving their medium bomber, the BADGER, with two engines as against our six?

Dr. Seoville. That is right.

Senator Symington. Thank you.

Senator Jackson. They claimed in connection with the civilian version of the BADGER that arrived in England recently, the engines, at least the thrust, was greater than anything the Western world had, and the British conceded it in the news story.

Dr. Seoville. That is right.

General Watson. To answer a previous question you just asked me, Mr. Jackson, and also to amplify previous testimony that I gave a few moments ago on the U. S. turbojet engine, the figure I gave was approximately 15,000 pounds thrust for the largest U. S. aircraft engine in production; and to recognize that this thrust could be augmented with after burner, which could cause this engine

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to develop approximately [23,500] pounds of thrust, with after burner operating.

Mr. Hamilton. How does that compare with the largest Soviet engine which is in operation?

General Watson. The largest Soviet engine that is operational at the present time is in the order of 19,000 pounds thrust.

Mr. Hamilton. With or without after burner?

General Watson. Without after burner.

Mr. Hamilton. Would there be a proportionate increase of the thrust of that engine with after burner?

General Watson. There would be a proportionate increase of thrust with an after burner.

Mr. Hamilton. What would be the increase?

General Watson. In the order of 25,000 pounds. And the highest thrust of the U. S. version would be approximately [23,500] with after burner.

Mr. Hamilton. You said the U. S. engine was in production and the Soviet engine was operational. Did you have any distinction in mind, General?

-127-

~~TOP SECRET~~

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General Watson. Yes, sir. The U. S. version is in production.

Mr. Hamilton. But not in operation? Or is it also in operation?

General Watson. I do not know whether it is now in operation.

Mr. Hamilton. The Soviet engine is in production and in operation?

General Watson. Yes, sir.

Mr. Hamilton. Is the U. S. engine in production and in operation?

General Watson. I don't know.

Mr. Hamilton. You don't have the figures?

General Watson. No, I have not.

Mr. Hamilton. Could you supply it?

General Watson. I could supply it.

(The information referred to is as follows:)

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-128-

~~TOP SECRET~~

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Mr. Hamilton. Could you name the engine, if you have it?

General Watson. Yes, sir. It is given a designation; the U. S. version of which I used in the previous testimony is the ~~[J57-P-21.]~~ That engine changes its designation when equipped with the after burner to ~~[J575-P-1.]~~

Mr. Hamilton. Did we have that engine in production as soon as the Russians did, the comparable engine, do you know?

General Watson. I do not believe so.

Mr. Hamilton. Do you have other illustrations of their pioneering work, General?

General Watson. Well, also in the propulsion field, as has been brought out, they have pioneered in the high-thrust turboprop engine field, having ~~[]~~ an approximately 12,000 equivalent shaft horsepower version in 1954.

They have also pioneered in the liquid rocket motor field.

Mr. Hamilton. Pardon me. Before you leave the turbo-prop field, do you know whether or not we had a comparable engine in operation, if you mean they did have one in operation in 1954, whether we had one in operation?

General Watson. No, sir, I don't believe we had any in operation.

Mr. Hamilton. We did not have any in operation.

Do you know whether we had any in production?

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General Watson. I can't answer that right now. I would have to get that information.

Mr. Hamilton. Do you know whether we had any interest in trying to produce one?

General Watson. Yes, sir.

Mr. Hamilton. Sir, I see some emphasis on that one. You say we were trying to produce one?

General Watson. Yes, sir; we were trying to develop one for production, let me put it that way.

Mr. Hamilton. If we didn't develop one for production, it was not because we didn't want it. In other words, you say we --

General Watson. I will have to answer that by saying, sir, that, Mr. Hamilton, I don't know the priority emphasis that was given to that project.

Now, further in the propulsion field, in the liquid rocket motor field, they have pioneered in the 100-metricton variety. []

Mr. Hamilton. I know it is difficult, and maybe you cannot make it any more precise than to say they have had considerable success, but could you tell us by that whether they had it in production?

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General Watson. I mean some of the fundamental research and development problems, according to our considered intelligence information, ^{have} ~~has~~ been in large measure overcome.

[]

Mr. Hamilton. I don't wish to press you on this, but I think it would be helpful to get this to the extent it is practical, and to the extent you know; and if you don't know, tell me, and we will seek elsewhere for it -- a comparison of their position and ours. Do you have any judgment as to whether they were ahead or behind or equal to us with respect to this rocket motor, say in 1953?

Mr. Dulles. Shouldn't these be given by Defense?

General Watson. I think so.

Mr. Dulles. I think, Mr. Hamilton, we are getting a little away from intelligence.

Mr. Hamilton. I thought that is what you would say.

General Watson. I am giving you to the best of my ability, and certainly these other areas, it would be difficult for me to recall.

Mr. Hamilton. All right, sir.

General Watson. Now, the next area in fundamental research and development that has been rather clear to us --

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Mr. Hamilton. Pardon me, If you are turning to another field --

General Watson. Yes, I am.

Mr. Hamilton. May I ask you another question before you leave the liquid rocket motor. May I ask you whether we know what they have been able to do since 1953 in this field?

General Watson. OFF THE RECORD

Mr. Hamilton. What would the use of that kind of a rocket motor be?

General Watson. Essentially for what would be called a guided missile, large rockets.

Mr. Hamilton. Ballistic missile of what range, having in mind the four types of range?

Senator Symington. Excuse me. You said "guided."

Mr. Hamilton. He said "ballistic."

Senator Symington. He said "guided."

General Watson. Guided missiles.

Senator Symington. When you say "guided," you are talking about a ballistic in this type of fuel, are you not?

Non-air-breathing missiles, would you say?

General Watson. Yes, non-air-breathing missile.

Senator Symington. I just wanted to make the record clear.

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General Watson. A 100-metric-ton propulsion unit would normally be used for something in the intermediate range. []

Mr. Hamilton. Would research and development in that field contribute to the development of a larger power unit for an inter-continental missile?

General Watson. Oh, yes, any research and development on the use of liquid propellants and fuel of that size would help. Certain fundamental research and development problems when tackled and solved always set the base for further research.

Senator Jackson. Right there, what about the solid propellants?

General Watson. [] They have an interest.

Senator Jackson. With their submarine force, you might think they would take an interest in solid propellants.

General Watson. That is a possibility.

Senator Jackson. I mean, I understood from a technical standpoint that it is very essential to safety.

Senator Symington. Have you finished those, Mr. Counsel?

Mr. Hamilton. I finished my question about the liquid rocket motor, and General Watson was turning to another development that they have pioneered.

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Senator Symington. How long do you think it will take? The reason I have asked is, we will stop at a quarter to one. Senator Saltonstall has some questions.

May I ask how long you think this will take to go into these matters?

General Watson. I have some other fields in which they have --

Mr. Dulles. Couldn't you just give the headings?

Senator Symington. Would you furnish a more detailed statement for the record, so that counsel's question -- if you will give the headings, and then give some more --

Mr. Hamilton. Then I won't ask any more questions, if you will submit them for the record.

General Watson. They would be in the field of metallurgy; in the field of, within this basic, fundamental research in the field of solving supersonic air dynamic problems, including the examination of thin-walled structures for supersonic aircraft, in the Mach 2, Mach 3 variety, including examination of temperature problems; in the field of mathematics, in the field of astral physics; in the field of metallurgy -- meteorology, and cosmic ray research.

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The Soviets have announced the formation of a committee of top scientists to study problems of interplanetary space communications.

I point these out as areas where they are no longer attempting to copy U. S. fundamental research, but have shown a native talent and a native capability to pioneer in these fields on their own.

Mr. Hamilton. Thank you.

COMMITTEE INSERT

Senator Symington. Senator Saltonstall, have you any questions?

Mr. Hamilton. I will defer further questioning.

Senator Saltonstall. I would just like to ask two questions of either Mr. Dulles or the General, and then I have got two or three to ask of you, Mr. Dulles.

Just so I will not get mixed up in my thinking as a layman, you used the words "fundamental research." I assume you mean by that basic research, as a layman knows it, with relation to the work of universities as opposed to industrial research; is that correct?

General Watson. That is correct. It can be categorized as fundamental basic research; and following on with that you have the developmental work based upon your fundamental research results.

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Senator Saltonstall. You there again used the word "fundamental."

General Watson. Basic research.

Senator Saltonstall. You use it essentially, as a layman knows it, as basic research?

General Watson. As basic research.

Senator Saltonstall. That is theoretical, new, inventive, imaginative thinking?

General Watson. Concepts, yes, sir.

Senator Saltonstall. Now, the other term that has been used sort of interchangeably here is "ballistic" and "guided" missiles. Now, I understood that a guided missile was one definite -- was a missile that was guided from the time it left the ground until the time it got to the target, whereas a ballistic missile was a missile which there was no control of, and went up into the supersonic atmosphere after it left the ground.

Now, do you use the term interchangeably?

General Watson. No, sir. We believe that a clearer expression of a guided missile is one which may be guided on the first part of its course, and then you lose control of the missile.

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Senator Symington. You said "guided" missile?

General Watson. Yes, sir.

Senator Symington. O.K.

General Watson. It is guided on part of its course, and then, depending upon the information that is received at that point, it carries on in a trajectory predetermined by the guidance that it had been given before.

Senator Jackson. You mean it is an air-breather?

General Watson. Well, you may have solid or liquid or air-breathing propelled.

Senator Jackson. I mean, generally speaking, as we know it.

General Watson. I am trying to clear the terms, and you may have guided missiles that have been given some guidance at some point in its trajectory, which may be either liquid, solid, or air-breathing, or anything else one might think of, to propel the missile. Propulsion has nothing to do with indicating whether it is a guided missile or not.

Now, to clarify for a moment further, a rocket is something that is completely unguided. It has normally a zero point of launch, as we call it. Since accuracy is lower, you usually fire several of these to strike your target.

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A ballistic guided missile essentially has, on most of its course, most of its trajectory, a ballistic trajectory, and it is guided for a period. So part of its course is guided.

Senator Saltonstall. So you use the term interchangeably, then.

General Watson. This has caused confusion, Senator Saltonstall.

Senator Saltonstall. Whether you control it from the start to finish, or whether you control it on the first part of its trajectory?

General Watson. That is right.

Senator Symington. Would you yield to me for a minute?

Senator Saltonstall. Yes.

Senator Symington. As I understand it, a guided missile, according to Secretary Quarles testimony before our committee, is a missile guided into the target in various ways, a guided missile.

General Watson. This is a very good --

Senator Symington. For example, the Navaho.

General Watson. Yes.

Senator Symington. Whereas a rocket is a missile which would be like shooting a rocket July 4th, or something.

General Watson. Yes.

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Senator Symington. But a ballistic missile is comparable to a shell.

General Watson. Yes.

Senator Symington. Or to a shotgun that is guided, or to a rifle that is guided, by the --

General Watson. Configuration.

Senator Symington. (Continuing) -- by the rifle itself, by the barrel; and after it leaves the barrel, it is on its own, with the premise that it follows the ballistic trajectory; is that correct?

General Watson. That is correct.

Senator Jackson. Dr. Scoville?

Dr. Scoville. Well, to clear up at least my understanding of these terms, a guided missile is the general term for any missile that is guided either part of its course or its complete course.

A ballistic missile may be guided just for the initial part of its course, and then follows a ballistic trajectory.

A rocket is a missile or is a gadget that does not get guided any part of its course.

In other words, a ballistic missile is really a type of guided missile. You cannot --

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Senator Jackson. Doctor, is it not true that a ballistic missile conceivably could have an initial, would have an initial system in the ends which could make corrections just before it hits the atmosphere for tumbling, and so on, so to that extent you end up with guidance at the end of a ballistic missile as well?

Dr. Scoville. I think that is correct.

Mr. Dulles. I think for your committee's purpose, we ought to get an agreed basic definition of it.

Senator Jackson. I wonder -- it seems to me the best way to define this, and I asked this question in other committees, and it has been interesting, is to give the characteristics of what we have at the present time. Would that not be a good way of defining it, to give the characteristics?

When you are talking about ballistic missiles of any range, you are getting way up in the range of 250 miles. When we think of guided missiles, we are talking about, at the present time, in keeping with our own research and development production, we are talking about air-breathing, low-flying, pilotless jet aircraft.

Senator Symington. I think it is pretty clear what some of us thought were guided missiles, and what some of us thought were

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ballistic missiles, and I think some testimony from the Department of Defense clouded that up, and I thought unfortunately, a month or six weeks ago.

But I believe it would be a good idea, especially since Senator Saltonstall has asked the question, if at this point in the record, Mr. Director, we could put an analysis of what these terms mean, in your opinion and in the opinion of the Department of Defense.

Would you do that?

Mr. Dulles. We will try to get an agreed statement on that.

(The information referred to is as follows:)

COMMITTEE INSERT

Senator Duff. Both you and General Watson used the term "trans-sonic" and "supersonic." It would be very helpful to me if there could be an exact definition of where one begins and where the other ends.

General Watson. Yes, sir.

-141-

~~TOP SECRET~~

~~TOP SECRET~~

With reference to the word "trans-sonic," this expression is normally used for speeds just beyond the speed of sound, sonic speed. This would be in the order, and we generally refer to the speed of sound as Mach 1.

Senator Saltonstall. That is 600 miles?

General Watson. That depends upon the altitude.

Senator Jackson. At sea level it is 720 --

Senator Symington. Seven hundred sixty miles an hour at sea level.

General Watson. But this varies with altitude, density, and a lot of factors.

Now, relatively, 1.1 would be the top of the trans-sonic speed, relatively speaking, where supersonic is beyond that up to Mach 2, Mach 3, and as far as we can get.

Does that clear it up for you?

Senator Saltonstall. Entirely.

Senator Jackson. Trans-sonic just pierces the sound barrier.

General Watson. Yes, and we just use it to express something not truly supersonic.

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Senator Jackson. Does it not mean this: "trans" means "across," from your Latin.

Senator Duff. Yes, but how far across.

Senator Jackson. Just across the fence. I assume that is what you mean by that.

General Watson. Yes, sir. And that is why we all --

Senator Symington. I want to give the floor back to Senator Saltonstall.

Senator Saltonstall. I want to say this: In the guided and ballistic missiles, unless you are going to go into this liquid, fluid, and air-sucking instrument, and so on, you are going to get us all mixed up unless you use those terms with a little more definiteness.

General Watson. Thank you, sir.

Senator Saltonstall. I say that most respectfully, because there are so many of these things, and they vary so greatly in importance, that the terms should not be used interchangeably, it seems to me.

General Watson. We have had that trouble before, and those of us who use it every day --

Senator Symington. Yes.

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Mr. Dulles. OFF THE RECORD

Senator Saltonstall. There you go again.

Mr. Dulles. OFF THE RECORD

Senator Jackson. Mr. Dulles, do the Soviets have a counterpart of our SNARK and other so-called guided missiles?

Senator Symington. Navaho is the other one.

Mr. Dulles. Air-breathing.

Senator Symington. Navaho.

Mr. Dulles. That is correct.

Senator Saltonstall. Unless you are going to use the term, I just repeat, unless you are going to use the term "guided missile" or "air-breathing," "liquid," every time you say it, you are going to, it seems to me, mix us up. It makes it very difficult for me.

General Watson. Yes, sir.

Mr. Dulles. OFF THE RECORD

Senator Saltonstall. Yes.

Senator Symington. Excuse me. We can go on for five or six more minutes, Senator Saltonstall, and I want you to take the time -- you have been very kind this morning -- or split it with Senator Duff,

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and then for the next five minutes I have one or two points which the committee will have to consider alone.

I thought we would stop at a quarter to one.

Before yielding that time to you, we would like to have, Mr. Director, in fulfilling our commitment when we started this committee, to have whoever you designate go over your testimony to release as much as possible which can be released to the press, as soon as possible. And would you see that that is done?

Mr. Dulles. I will do my best. That is really a very tough assignment.

Senator Symington. I imagine it is.

Mr. Dulles. Because there is not very much of it that I honestly feel can safely be released. But I will discuss it with you.

Senator Symington. Whatever you feel can be released somewhat, so we do not chisel on our promise, so that whatever could be released would be released.

Mr. Hamilton. I think it would be the sense of the committee, I mean I just raise the question to see if it is right, if you care to paraphrase or obscure by relationship, or anything of that kind, that that might be one possible way of doing it.

I just raise that as a suggestion.

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Mr. Dulles. I will put several people to work on the testimony immediately, in conjunction with General Watson, and I will do my very best on it.

Senator Symington. If you would. Thank you very much.

Senator?

Senator Saltonstall. I would just like to ask, Mr. Dulles, you have given us some very interesting testimony of intelligence efforts, and you have gone into great detail in some instances.

Now, essentially your position is that of an evaluator of all the intelligence that comes into this country through the various sources from abroad. Your responsibility is to evaluate this testimony, and then pass it on to the National Security Council; am I correct in that?

Mr. Dulles. That is correct. But when you say that is my function, I exercise that function through the Intelligence Advisory Committee, so as to get the benefit of the advice of the heads of the various intelligence groups in the Government.

Senator Saltonstall. I see.

Mr. Dulles. And we have these various subcommittees. We have the subcommittee for the atomic energy field, we have a guided missile

-146-

~~TOP SECRET~~

~~TOP SECRET~~

subcommittee on which the various intelligence agencies are represented, and their views are then presented at a meeting of the IAC, and then that becomes national intelligence, which is then distributed to the President and the members of the National Security Council who may be interested, to Defense, and in the community, as seems necessary on a need-to-know basis.

Senator Saltonstall. And the State Department?

Mr. Dulles. Oh, yes, and the State Department.

-147-

~~TOP SECRET~~

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(OFF THE RECORD)

Senator Saltonstall. Then, Mr. Dulles, that information comes over here, and could you give us a quick summary of how it gets into these various committees, how it gets into the position of national intelligence?

Mr. Dulles. It gets into the various committees through the producing agency. The representative of the particular services will bring to these committee meetings the intelligence that he may have on a particular subject, say guided missiles. It is very possible that a certain amount of that intelligence, probably a great deal of it, will have been distributed, upon receipt in the intelligence community. We distribute [] reports [] throughout the community on a need-to-know basis.

And when we get these committees together, they pull together all the intelligence on the particular field of their research and analysis. That might be in the guided missile field, it might be in the atomic field, and it might be in the field of economic intelligence, or the like.

Senator Saltonstall. Mr. Chairman, I think I have -- I wanted to develop this to a conclusion. I think it will take me three, four, or five minutes more.

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Senator Symington. Senator Saltonstall, will you go ahead and ask any questions you want to ask.

Senator Saltonstall. Mr. Chairman, I would most respectfully like to say this: I want to trace the history of the intelligence through, and I would appreciate if all this colloquy might be placed at the end, and my questions should be put all together, so we can trace this all through.

Senator Symington. The record will be so handled.

Senator Saltonstall. Mr. Dulles, you say all this comes in and it is distributed at an informational level to all people who should be entitled to it?

Mr. Dulles. Yes.

Senator Saltonstall. Then you have these various committees, and this intelligence comes in to these committees which are composed of people from each one of these agencies; is that correct?

Mr. Dulles. Correct.

Senator Saltonstall. And these subcommittees evaluate their technical information.

Mr. Dulles. Correct.

Senator Saltonstall. That comes in to a central, over-all committee, of which you are the head?

-149-

~~TOP SECRET~~

~~TOP SECRET~~

Mr. Dulles. Correct.

Senator Saltonstall. And that committee is composed of representatives of the State Department, the Defense Department, and what others?

Mr. Dulles. I am chairman of it; the State Department's Intelligence Officer is a member; the G-2; the head of Air Force Intelligence; the Chief of Naval Intelligence; the Intelligence Officer of the Joint Staff -- that is, the Joint Chiefs of Staff; the Intelligence Officer of the Atomic Energy Commission, for matters relating to atomic energy; and a representative of the FBI for any matters where intelligence bears on internal security.

Senator Saltonstall. And that group meets how often?

Mr. Dulles. Always weekly, and more often if there is a crisis situation where we have to hand in a quick appraisal. []

There is where we prepare the national estimates, and it is in the form of national estimates that the finished intelligence is distributed. ~~Because obviously it is only the technician who can read only the raw intelligence.~~]

Senator Saltonstall. That is what I was getting at.

Now, that national intelligence is distributed, as you say, to the National Security Council, the Department of State, the

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Secretary of Defense, and other interested people.

Mr. Dulles. That is correct.

Senator Saltonstall. And you are the representative of that intelligence effort on the National Security Council?

Mr. Dulles. I brief the National Security Council generally on a weekly basis, whenever they meet; and where there are important developments in a field that we have been discussing, those are presented at that time, together with intelligence with regard to critical developing situations in any part of the world.

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11
Senator Saltonstall. And at the National Security level, you elaborate on the evaluation ^{of} to that committee if it is necessary to do so?

Mr. Dulles. That is correct, sir.

Senator Saltonstall. You in no sense make policy?

Mr. Dulles. I have no policy-making functions whatsoever.

Senator Symington. Will the Senator yield to me for one observation?

Nor does the National Security Council do it. It is strictly an advisory body to the President, by law.

Mr. Dulles. That is correct.

Senator Symington. Thank you.

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Senator Saltonstall. And the National Security Council, as Senator Symington has brought out, under the Unification Act of 1947, is the advisory group to the President of the United States, as Commander-in-Chief and as President.

Mr. Dulles. Yes, in the field of its activities. We differ, of course, from the Cabinet.

Senator Saltonstall. Yes.

Mr. Dulles. In the field of national security, particularly.

Senator Saltonstall. Now, you have been the head of the CIA since President Eisenhower became President, have you not?

Mr. Dulles. February of 1953, I was made Director. I had been Deputy Director for a year and a half previous to that.

Senator Saltonstall. Have you attended the meetings of the National Security Council regularly?

Mr. Dulles. Oh, yes. I always make it a point to be present, and I have missed very few.

Senator Saltonstall. Do you give them this evaluation at every meeting, or as often as it is necessary?

Mr. Dulles. I give them an evaluation almost every meeting, unless there is a meeting called for some special purpose. But that is very rare. []

Senator Saltonstall. So that this information that you have been giving to us, with General Watson assisting you, has been given

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to the National Security Council in as much detail as you believe to be necessary to do?

Mr. Dulles. Yes, sir. A very large part of that is given in the form of national estimates, and I would call the attention of the Security Council to an important national estimate. But they are all distributed to the members of the National Security Council.

Senator Saltonstall. Do you know if that has been the practice prior to this Administration?

Mr. Dulles. The practice differed somewhat under Mr. Truman's Administration. We used to give Mr. Truman personally a briefing on, I think it was Saturday morning. That was generally done by Bedell Smith. When he was away, then I would go.

Under those conditions, then, the Security Council was not generally briefed as a whole, although on any matter coming up, in the case of the previous Administration, that had intelligence connotations, ~~the~~ General Bedell Smith would present the intelligence view.

Senator Saltonstall. How long has this system of evaluation been in effect?

-153-

~~TOP SECRET~~

~~TOP SECRET~~

25X1A9a Mr. Dulles. About five years -- do you know the exact date,



I don't know.

Mr. Dulles. General Bedell Smith introduced it when he came in. There was something prior to that, but he became Director in 1950, so this method of evaluation has been in five or six years.

Senator Saltonstall. Prior to that, Admiral Hillenkoetter, if I recall correctly, with the starting of the Korean War, Admiral Hillenkoetter was giving his evaluation of intelligence to the State Department, to the Secretary of State and the Secretary of Defense, and, I assume, to the President of the United States, although that was not in direct evidence.

Mr. Dulles. That is correct, so far as I know.

Senator Symington. Will the Senator yield?

There was little or no difference in the way that the Director of Central Intelligence is outlining it as of today, and as it was before, under other Directors, with the exception of the point he makes. If he does it each day, each time regularly, that was not done.

But when I was a member of the National Security Council, it was done whenever a member of the Council or the President

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desired it, by either General Vandenberg or Admiral Hillenkoetter or General Smith.

When the National Security Council was first formed, it had a particular asset in that the Executive Secretary of the National Security Council, at its original invocation, was also the first Director of the Central Intelligence Agency.

It is a known fact that under the law, the operating aspect of our intelligence, to wit, the Central Intelligence Agency, reports to an Advisory Council, which in effect means it reports directly to the President.

Now, I would not want to see the impression left, and I'm sure the Director does not intend to leave the impression that whereas Mr. Truman used to get briefings alone, consistently, from other people, and connected with the CIA,, that the President of the United States does not also get those briefings today, Mr. Eisenhower, if he sees fit; is that correct?

Mr. Dulles. That is quite correct.

Senator Symington. He issues no orders that he does not want any direct information.

Mr. Dulles. No.

Senator Symington. I did not want to leave the record at that.

-155-

~~TOP SECRET~~

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Mr. Dulles. I see the President frequently.

Senator Symington. You see my point, the way you described it.

Mr. Dulles. I didn't mean to give that impression. I see the President frequently, and whenever I feel there is anything of particular importance that cannot wait until the next Thursday, I would go to him with it immediately.

Senator Symington. Without in any sense being partisan, I always was interested in the amount of interest that Mr. Truman had in the CIA and in the direct briefings he got, and I am sure that President Eisenhower has the same interest, does he not?

Mr. Dulles. He has the same interest. They both have shown a very great interest in the development of the Central Intelligence Agency, and both have consistently given it their full support and backing.

Senator Saltonstall. Just one more question.

I think as that evaluator, you explain that information to the best of your ability, but you do not make any recommendations as to what shall be done?

Mr. Dulles. No, sir. That is for the other advisers to the President, particularly the State Department in the field of policy, and the Defense Department in the field of national defense.

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Senator Saltonstall. Just one more question:

You and General Watson have gone into great detail in elaboration here, using figures that, to an ordinary layman, would be bringing out pretty much detailed knowledge.

How much of these figures that you have given to us are, in your opinion, based on absolutely accurate knowledge, and how much are estimates?

Mr. Dulles. [] Very few [] estimates going to the future are based on absolutely accurate knowledge. [] The best you can do is to estimate on the basis of given intelligence at a point, what we know of their general programs, what we know of their capabilities *and requirements.*

But those figures that we gave for future periods [] have to be taken with a [] possibility of a margin of error, *and with recognition of a possible change in emphasis on types of delivery vehicles.*

Senator Saltonstall. But your present rates of production, say, January 1956, that you went into in considerable detail, are those figures, in your opinion, accurate?

Mr. Dulles. Those figures also are subject to a margin of error.

Senator Saltonstall. Subject -- in other words, you are bringing them in from several sources and evaluating them?

Mr. Dulles. That is correct.

-157-

~~TOP SECRET~~

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Senator Saltonstall. And it is not like going out into one of our factories, for instance, and asking the manager of that factory, "How many planes are you making in a week or a month"?

Mr. Dulles. Unfortunately, it is very different.

Senator Saltonstall. Yes.

Mr. Dulles. (OFF THE RECORD)

Senator Saltonstall. Now, the estimate as to the number of scientists and the estimates of the number of boys and girls in college -- how accurate is that?

Mr. Dulles. (OFF THE RECORD)

Senator Saltonstall. Thank you, Mr. Dulles.

Senator Jackson. Why do we not meet at 2:30, or something?

Senator Symington. How does your afternoon look on this?

Mr. Dulles. The afternoon looks unusually bad, unfortunately.

Senator Symington. How does tomorrow morning look to you?

(Off the record discussion)

Senator Duff. May I ask another question, since I will not be here?

Are you going into the industrial complex, like the production of steel, and so on?

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Mr. Hamilton. We wanted to cover it in a brief and summary fashion, Senator Duff, just the question of whether their potential in that regard now and for [] seemed to be adequate to support the military program.

Senator Duff. The reason I asked that was one of the things I recall about Hitler's boasts prior to World War II, that he had the kind of industrial complex that no matter how long it lasted, they were going to be equal to it; and it proved to be fallacious in the end.

And the other thing they boasted about was their agricultural ability to supply what they needed to eat, and they did not have that. And it seemed to me, just offhand, that both those things are components of the picture just as much as these others.

Mr. Hamilton. Yes. We did plan to go into that. There is some very interesting material, actually, that Mr. Dulles has, which bears on that point.

Senator Duff. One of the reasons that especially interested me was that in World War II, the State of Pennsylvania alone produced more steel than Russia.

Mr. Dulles. We could submit memoranda, if it would be of help to you, on those particular points. We have studies.

~~TOP SECRET~~

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That, of course, was a non-classified statement, and we could give you more information than was given there.

Mr. Hamilton. I think it would be helpful, and it would not take so much time.

Mr. Dulles. That would be quite easy.

Mr. Hamilton. If you can give us the precise information, say, on food, aluminum, and steel, and give us --

Senator Duff. Transportation.

Mr. Dulles. And that is one of their weakest points, agriculture.

Senator Symington. I think, if I may interrupt, I should say 738 miles sea level for Mach 1.

(The information referred to is as follows:)

COMMITTEE INSERT

Senator Symington. In other words, as I understand it, what you have done here for this Administration is to give us the best you know with respect to your experience as to what the Russians have in these fields?

Mr. Dulles. That is correct.

Senator Symington. I am interested in reminding the committee that Mr. Benson would not tell me what the parity would be for the month of April.

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Mr. Dulles. Yes.

Could I make one point in connection with your question?

Senator Symington. Yes.

Mr. Dulles. I want to point out the briefings I now give to the National Security Council with the President present are very similar to the briefings we used to give Mr. Truman on Saturday morning. I didn't want to indicate in either case there had been any slackening off in the amount or detail of the intelligence which the President desired to get now, or in the past. It is very much the same.

Senator Symington. Yes.

Senator Saltonstall. I did not, Mr. Chairman, desire to draw any partisan significance from that. I was simply trying to brace it back.

Senator Symington. Well, I think if you will come at 10:00 tomorrow, we would deeply appreciate it, and I am sure we can get through.

Mr. Hamilton. One more point. For the record, you used "IAC".

Mr. Dulles. Intelligence Advisory Committee.

Mr. Hamilton. I didn't understand what that meant.

Mr. Dulles. Intelligence Advisory Committee.

-161-

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